AMENDMENTS TO THE CLAIMS

1-6. (Cancelled)

7. (Currently Amended) ~~The ring switchover method according to claim 4~~A ring switchover method in a network constituted of layer 2 switches connected in a ring shape, each layer 2 switch having a path control function and a failure detection function, said ring switchover method comprising:

    providing in each layer 2 switch an address learning table in which a Media Access Control (MAC) address and a corresponding port are stored;

    on detection of a link failure between mutually neighboring layer 2 switches, transmitting a failure notification from packet from each neighboring layer 2 switch;

    in a layer 2 switch having received the failure notification frame, recording a Media Access Control (MAC) address of said layer 2 switch into the failure notification frame, and transferring the failure notification frame to a neighboring layer 2 switch;

    wherein, when the network is separated into two network groups caused by a failure, with respect to a host address connected to an arbitrary layer 2 switch, updating path information in the address learning table in a layer 2 switch belonging to the other group than the group to which said layer 2 switch belongs, so that a packet transmission direction on the ring is shifted to a port side opposite to the direction having been used up to the present; and,

    wherein updating the path information in the address learning table is performed by exchanging address information related to system modification between the arbitrary layer 2 switch and the layer 2 switch belonging to the other group by use of a system switchover frame.

8. (Currently Amended) ~~The ring switchover method according to claim 5~~A ring switchover in

a network constituted of layer 2 switches connected in a ring shape, each layer 2 switch having a path control function and a failure detection function, said ring switchover method comprising:

providing in each layer 2 switch an address learning table in which a Media Access Control (MAC) address and a corresponding port are stored;

on detection of a link failure between mutually neighboring layer 2 switches, transmitting a failure notification from packet from each neighboring layer 2 switch;

in a layer 2 switch having received the failure notification frame, recording a Media Access Control (MAC) address of said layer 2 switch into the failure notification frame, and transferring the failure notification frame to a neighboring layer 2 switch, wherein, on receipt of the failure notification frame in a layer 2 switch having a blocking port, said layer 2 switch stores a record, indicative of the layer 2 switch of interest having a blocking port, into the failure notification frame;

wherein, when the network is separated into two network groups caused by a failure, with respect to a host address connected to an arbitrary layer 2 switch, updating path information in the address learning table in a layer 2 switch belonging to the other group than the group to which said layer 2 switch belongs, so that a packet transmission direction on the ring is shifted to a port side opposite to the direction having been used up to the present; and ,

wherein updating the path information in the address learning table is performed by exchanging address information related to system modification between the arbitrary layer 2 switch and the layer 2 switch belonging to the other group by use of a system switchover frame.

9. (Currently Amended) ~~The ring switchover method according to claim 6~~A ring switchover method in a network constituted of layer 2 switches connected in a ring shape, each layer 2

switch having a path control function and a failure detection function, said ring switchover method comprising:

providing in each layer 2 switch an address learning table in which a Media Access Control (MAC) address and a corresponding port are stored;

transmitting a state notification frame from a layer 2 switch connected in the ring shape successively to neighboring layer 2 switches;

in the neighboring layer 2 switch, detecting that the corresponding neighboring layer 2 switch is faulty when the state notification frames are not received for a predetermined number of times;

transmitting a failure notification frame packet from the layer 2 switch having detected the failure;

recording a Media Access Control (MAC) address of a layer 2 switch having received the failure notification frame into said failure notification frame;

transferring the failure notification frame to a neighboring layer 2 switch;

wherein, when the network is separated into two network groups caused by a failure, with respect to a host address connected to an arbitrary layer 2 switch, updating path information in the address learning table in a layer 2 switch belonging to the other group than the group to which said layer 2 switch belongs, so that a packet transmission direction on the ring is shifted to a port side opposite to the direction having been used up to the present; and,

wherein updating the path information in the address learning table is performed by exchanging address information related to system modification between the arbitrary layer 2 switch and the layer 2 switch belonging to the other group by use of a system switchover frame.

10. (Original) The ring switchover method according to claim 7, wherein updating the path information in the address learning table is performed by transmitting either a broadcast frame in which a Media Access Control (MAC) address of a host under each layer 2 switch is set as an originating address, or a frame dedicatedly provided for updating the address learning table, at the time of a system switchover.

11. (Original) The ring switchover method according to claim 8, wherein updating the path information in the address learning table is performed by transmitting either a broadcast frame in which a Media Access Control (MAC) address of a host under each layer 2 switch is set as an originating address, or a frame dedicatedly provided for updating the address learning table, at the time of a system switchover.

12. (Original) The ring switchover method according to claim 9, wherein updating the path information in the address learning table is performed by transmitting either a broadcast frame in which a Media Access Control (MAC) address of a host under each layer 2 switch is set as an originating address, or a frame dedicatedly provided for updating the address learning table, at the time of a system switchover.